REMARKS

The Examiner is thanked for the thorough examination of this application. The Office Action, however, has tentatively rejected all claims 1-20. For at least the reasons set forth herein, Applicant disagrees and requests reconsideration and withdrawal of the rejections.

Cited Reference is Not Prior Art to Present Application

The Office Action has rejected all claims 1-20 under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. published application 2005/0076134 to *Bialik et al.* (hereafter the '134 reference). Applicants respectfully submit that the presently claimed embodiments patently define over the '134 reference. However, Applicants need not detail the distinctions of the present claims, as the '134 reference is not prior art to the present application.

The present application was filed with the U.S. PTO on August 27, 2001. The '134 reference was filed as a national phase application of a PCT application, which was filed on May 13, 2002. As the filing date of the present application pre-dates the PCT application filing date of the '134 reference, the '134 reference is not prior art under 35 U.S.C. § 102(e). For at least this reason, the rejections of all claims 1-20 should be withdrawn.

The undersigned notes that the '134 reference does claim the priority benefit of a U.S. provisional application (serial number 60/291,310), which was filed on May 17, 2001. However, the rejections of the present Office Action have not referenced or relied upon the substance of this provisional application. If the contents of the provisional application are to be relied upon, then the relevant teachings of the provisional application must be specifically referenced in the rejections.

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Notwithstanding, and in an effort to advance the prosecution of the present application, the undersigned has retrieved a copy of the provisional application to consider in light of the rejections set forth in the present Office Action. A copy of provisional application 60/291,310 is attached to this response for the Examiner's reference. The undersigned has found the contents of the provisional application to lack significant content (allegedly provided in the '134 reference) relied upon in forming the outstanding claim rejections. As an example, the rejection of independent claim 1 relies heavily on the content of FIGs. 3 and 4 of the '134 reference. Neither of these figures, however, is contained within the provisional application. Accordingly, the teachings of the '134 patent relied upon by the rejections set forth in the Office Action cannot be translated directly to teachings of the provisional application.

For at least these reasons, the rejections of claims 1-20 should be withdrawn. The undersigned respectfully submits that, should the Examiner render any future claim rejections (based on contents of the provisional application), any such future rejections will constitute new grounds (not necessitated by any amendment) and should be set forth in a non-Final Office Action.

CONCLUSION

Applicant respectfully submits that all claims are now in proper condition for allowance, and respectfully request that the Examiner pass this case to issuance. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

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No fee is believed to be due in connection with this Response to Office Action. If,

however, any fee is deemed to be payable, you are hereby authorized to charge any such fee to

Hewlett-Packard Company's Deposit Account No. 08-2025.

Respectfully submitted,

By: _____

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770-933-9500

Please continue to send all future correspondence to:

Hewlett-Packard Development Company, L.P.
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A Method For Conversion of Multiple Rich Media Formats

Field of Invention

The present invention relates to processing multiple video data stream sources and formats, and in particular, to converting between different video encoding formats (including uncompressed video) and sources to other video encoding formats, as an multi inputs to multi outputs system, concurrently.

Summary of the Invention

The present invention allows multiple formats and sources to be converted to other formats in a concurrent mode of operation by a media format matrix, which allows multi format inputs and delivering outputs.

The matrix of the present invention can be the basis for a variety range of systems that can be used as video and audio streaming systems to a large-scale number of receivers. Using the matrix concept of the present invention is the general case for every video streaming system architecture.

Description

This invention relates to a video and audio signal processing which is often used to encode data signals into an encoded bit stream and to decode such encoded bit stream to reconstruct the original video and audio signal.

As for today, there are several patents dealing with video and audio streams manipulations for decoding/encoding of streams from one format to another, however, each of these patents is dedicated to a specific set of formats/transportation/architectures.

The basic idea of the present invention is a Media Format Matrix which allows multiple input streams (including live video signal inputs) of multiple formats to be transcoded or encoded to different output streams, thus performing a paralleled video formats conversion (decoding, encoding and transcoding) for as many inputs as required (see Figure 1). The matrix can have unlimited number of inputs and outputs of any kind and can perform multiple operations concurrently.

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enabling video splicing and local content insertion on real time events.

The actual transcoding within the matrix can be performed through a wide collection of transcoding and conversion methods that are available at the time the matrix is configured or modified.

The matrix configuration enables basic functionality modes between the inputs and the outputs of the matrix, which can be activated simultaneously:

From / To	Uncompressed	Compressed
Uncompressed	X	Encode
Compressed	Decode	Transcode

Typical formats of compressed video and audio that can be implemented are, for example: MPEG1, MPEG2 SPTS, MPEG2 TS, MPEG 2 MPTS, MPEG 4, REAL video, QuickTime, WMT etc.

The matrix is controlled via standard networking management protocols (e.g. SNMP, HTTP, CLI), which allow the user to configure the activity of the system, and monitor its products.
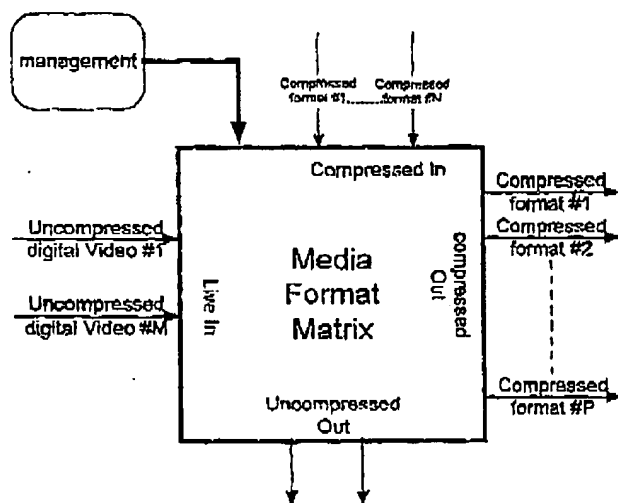
Figure 1 In an additional embodiment of the present invention, a *communicator* device can be added to the matrix, which allows accessibility to a variety of communication transport media, such as: IP, ATM, LMDS, ADSL, FTTx, DVB (S, T, ASI), Cellular, etc (see Figure

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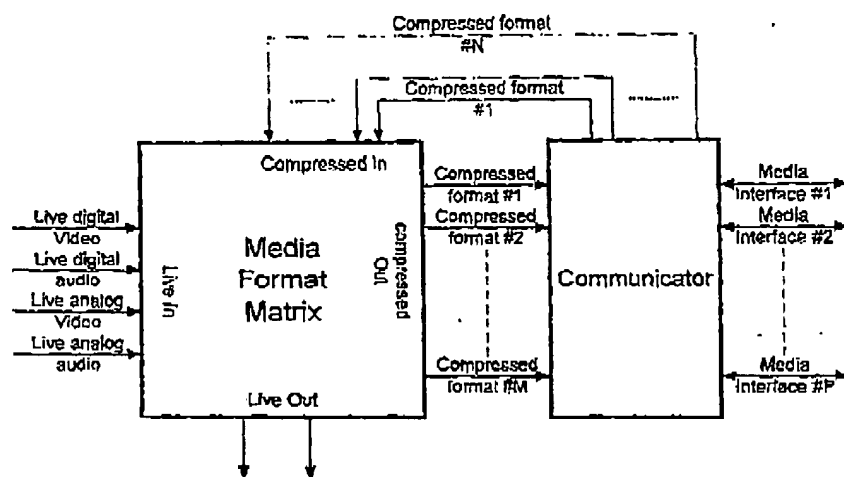the matrix to local or wide area distribution networks.

Figure 2

In a further embodiment of the present invention, a storage device (e.g. SCSI Raid) can be added to the matrix, which enables the matrix to act as a video server that has functionality of video library to be run as a VOD machine. By using such a storage, the number of format conversions which is required may be reduced, as a file may be stored in the storage, and later forwarded by the matrix in as many formats as needed. For example, a content supplier can broadcast a video stream from one stored file to as many clients as desired, and each of the clients can receive the file in different video formats and on different communication backbones (see Figure 3).

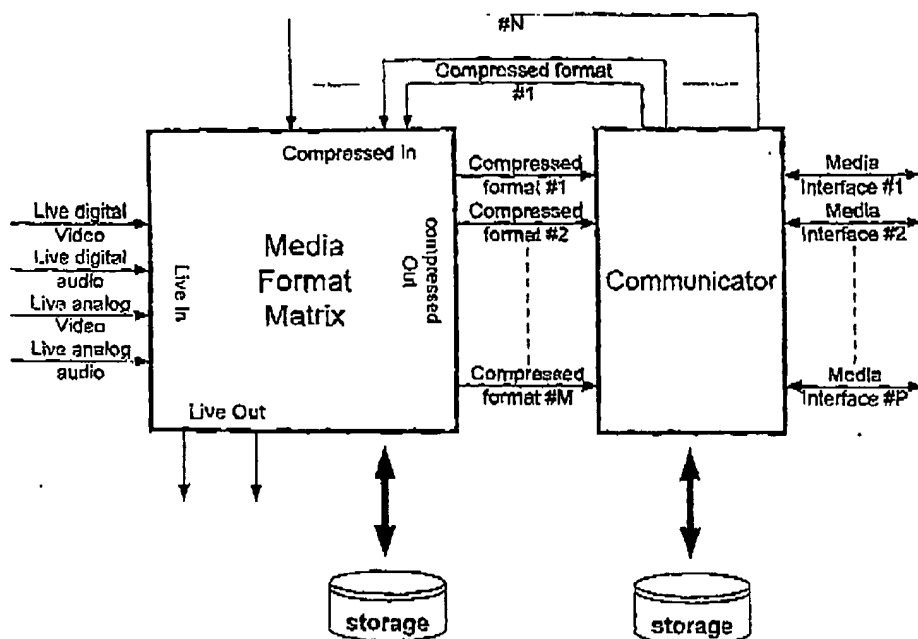3   P-3975-USP

Figure 3

The storage connectivity, which may be used also together with a communicator, as shown in Fig. 3 above, adds improved functionality modes to the matrix of the present invention, which may include now the following operations simultaneously:

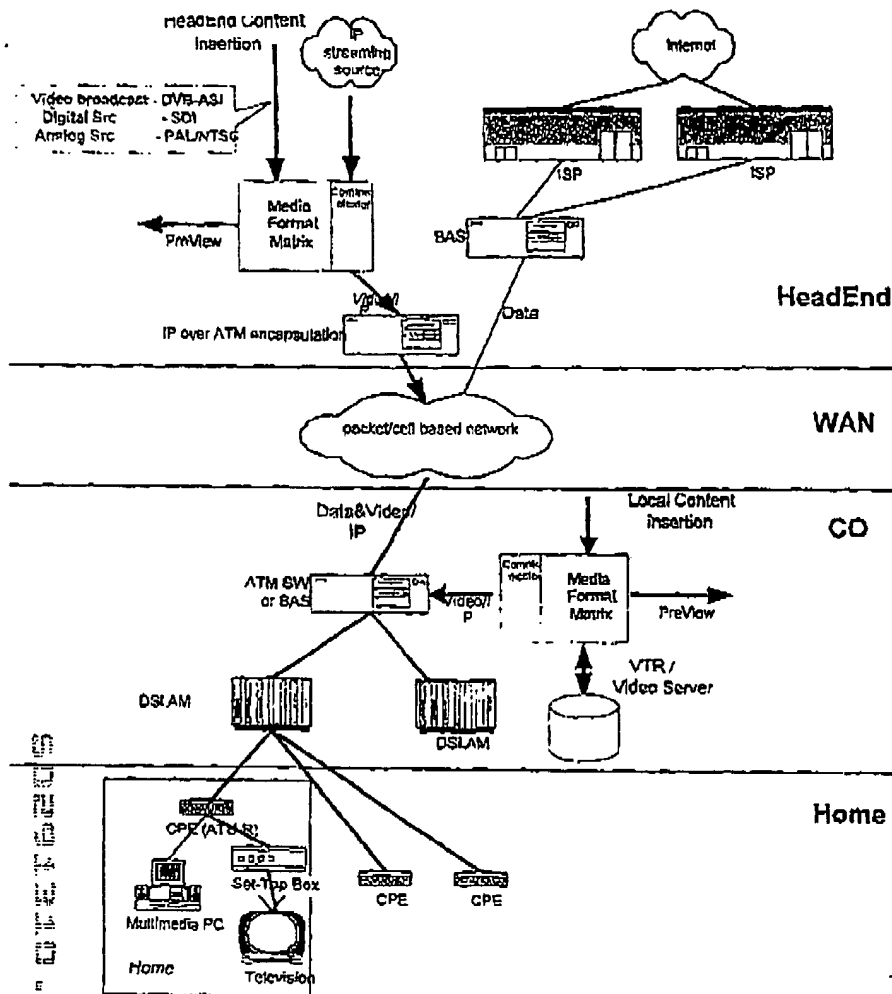| From / To	Live	Media	Storage
Live	X	Compress	Compress
Media	Decode	Transcode	Compress
Storage	Decode	Transcode	X

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Figure 4

Figure 4 above presents an examplary system for video streaming, where the format matrix of the present inventionhas several functionalities. As an HeadEnd perspective, the matrix can be used as a main encoding engine, where several different inputs and formats are encoded to a variety of output streams, which can be transported on any packet/cell switching based networks, while having also a possibility of previewing each channel locally and an option of inserting live local video streams.

In a Central Office perspective, the matrix of the present invention can maintain video server system connectivity, which allows reduction in the video formats storing needed, by requiring only one copy of a video to be stored for transcoding to multiple formats on customer performance key, while enabling local live video insertion and local preview of the contents.

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Even though the radioctonanics are varied, the structure of the matrix of the present invention remains the same and thus allows reduction in the maintenance costs.

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CLAIMS

1. A method for conversion of data formats substantially as described hereinabove.

2. A method for conversion of data formats substantially as illustrated in any of the drawings.

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